True 3-D Holographic Sound

RAM-BASED 16-BIT WAVETABLE

THE FUTURE OF SOUND & MUSIC FOR PC

USER'S GUIDE

UltraSound Compatible.....

Overview

Your new sound card is a full-featured card capable of providing 16-bit, CD quality sound from your desktop personal computer. Whether you plan to use your sound card to add excitement to business application, music, or games, this card will meet your sound needs for years to come. Your sound card is many products rolled into one.

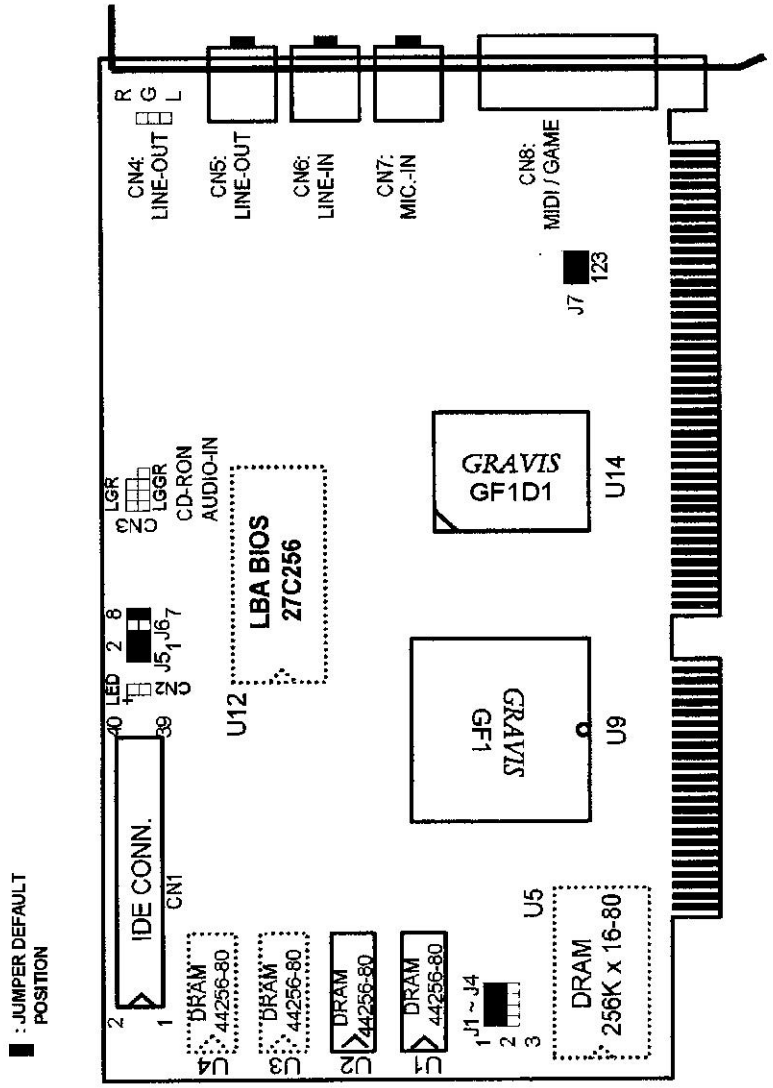
System Requirements:

- ☑ IBM compatible 386 or greater
- ☑ MS DOS 5.0 or greater
- ☑ 12MB of hard disk space for sound card software
- ☑ Windows 3.1 (For reading Manual file in the CD-TITLE sub-directory "DOX"
- ☑ CD-ROM drive

System Recommendations:

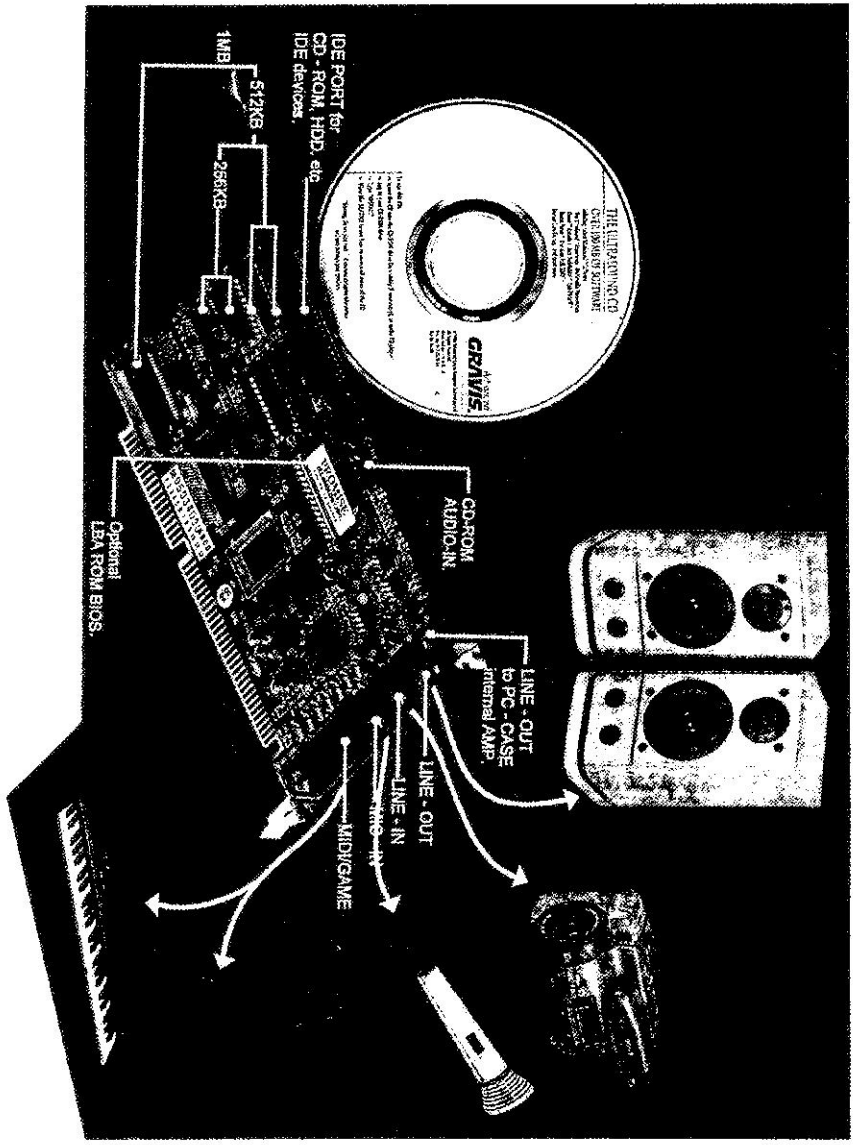
- ☺ 386-25 MHz or greater, with at least 4MB of RAM
- ☺ MS DOS 6.0 or greater
- ☺ VGA monitor and video card
- ☺ Hard Disk Drive (20 milliseconds or better seek time)
- ☺ Microsoft compatible mouse
- ☺ For Windows applications, Windows 3.1 in 386 Enhanced mode is required
- ☺ Good quality speaker with high power amplifier

Sound Card Drawing Layout



Key Features & Benefits

* A Microsoft Windows® Multimedia (MPC-II) sound card for music, multimedia, and business applications.
* RAM-based wavetable synthesis (256KB/default could be upgraded to 1MB), lets you reproduce an unlimited number of sound with incredible accuracy.
* It sounds worlds better than any other low-priced Sound card and it's one of the easiest to install.
* Supports full-package drivers for Windows, DOS, Utilities, DEMO programs (many Hours), famous Games (over 100MB) and much more in CD-TITLE.
* A sound card for games, supporting Roland MT-32,® Roland Sound Canvas,® AdLib,® Sound Blaster® and Ultra Sound® games for the best sound.
* A digital sound card capable of simultaneous recording and playback, with up to 32 simultaneous digital channels, full mixing capabilities, and built-in interface for IDE (ATAPI) CD-ROM driver.
* A optional BIOS for LBA function to control the IDE channel one (Primary address) and channel two (Secondary address) even for old ver. M/B to support larger than 528MB HDD drivers.
* Provides a full 16-bit General MIDI patch set comprised of 192 instruments, drums, and sound effects for playing MIDI files.
* Provide 16-bit CD quality sound, and 16-bit DMA to transfer sound data for recording and playing.
* Supports 16-bit stereo playback and 8-bit recording up to 44.1 KHz.
* Supports 8 and 16 bit playback in all Windows 3.1 WAV formats (i.e., 8-bit, 16-bit, Mono, Stereo, 11025 Hz, 22050 Hz, 44100, 48000 Hz).
* Software set-up for DMA, IRQ and Game port setting, speed compessating joystick port.
* full MIDI IN and MIDI OUT capabilities are supported.
* A sound card can play WAV, MID, RMI, MOD, SND, ULT, POP etc sound files.



MEMARY UPGRADE:

J1 ------ J4		
1-2 ON	U1 --- U4 AS BANK 0 U5 ·····AS BANK 1	*
2-3 ON	U5·····AS BANK 0 U1 --- U4 AS BANK 1	

NOTE:

1. U1 + U2 = 256KB
2. U1 + U2 + U3 + U4 = 512KB
3. U1 + U2 + U3 + U4 + U5 = 1024KB
4. IF, U5 ONLY = 512KB
5. U5 + U1 + U2 = 768KB

BASE PORT ADDRESS:

J6 : SOUND ADDRESS						
	210	220	230	240	250	260
1 - 2	OFF	ON	ON	ON	ON	ON
3 - 4	ON	ON	ON	OFF	OFF	OFF
5 - 6	ON	OFF	OFF	ON	ON	OFF
7 - 8	ON	ON	OFF	ON	OFF	ON
		*				

IDE PORT SETTING:

IDE	ADDRESS : SECONDARY		
	IRQ : 15		
	J5		
	ON	ENABLE	*
	OFF	DISABLE	

Note: Please set DISABLE in case the M/B already build in two IDE channels, or the I/O control card supports two IDE ports.

LBA ROM BIOS SETTING:

J7 : LBA BIOS SETTING				
1	2	3	ADDRESS	
x	x	OFF	BIOS DISABLE	
ON	ON	ON	C8XXXh	*
ON	OFF	ON	CCXXXh	
OFF	ON	ON	D8XXXh	
OFF	OFF	ON	DCXXXh	

Note: This LBA ROM BIOS is optional, if your sound card with this ROM BIOS, please refer to attach manual for detail instructions.

Hardware Installation:

1. Turn down your computer and disconnect all power cords.
2. Remove the cover from your computer. Refer to your computer system user's guide for more details.
3. Connect the flat cable and audio cable of CD-ROM drive if it is used with the Sound card.
4. Plug the Sound Card into any free 16-bit expansion slot of the computer
5. Put the computer cover back on and reconnect the power cords.

Connections of Devices:

To connect devices like speaker to the card, see card drawing layout for the connection of the various devices. There are few rules you have to follow.

* Make sure the devices are plugged into the correct jack.
* Use a good quality microphone & good quality speaker w/high power amplifier

CD-ROM Drive:

Your sound card has a built-in IDE port for ATAPI CD-ROM drive interface and a AUDIO-IN connector for CD-ROM audio signal output to sound card. There are 2.54mm (build in the sound card) and 2.0mm (through a small daughter board) pitch for variety headers. The necessary audio cable and 40-pin flat cable are provided with you purchase the CD-ROM drive.

Software Installation:

Several software packages are bundled with your sound card. Simple procedure as below:

1. After Boot up, put "THE ULTRASOUND CD" cd-title into CD-ROM drive and key-in "INSTALL", a dialog box as below will guide you to install program.

```
Gravis UltraSound CD-ROM Installer
Version 1.1
(1) View the README (Do this first)
(2) UltraSound Experience CD_ROM Demo (Windows)
(3) View BBS file listing

UltraSound Software Installation
(4) UltraSound, UltraSound MAX and ACE software
(5) Power Chords Debut plus demos of other Howling Dog products
(6) Midisoft Recording Session and Sound Impression

Software games that support UltraSound
*(A) DOOM Episode 1          (B) Raptor: Call of the Shadows
(C) Wacky Wheels             (D) Epic Pinball - Super Android
(E) Hocus Pocus              (F) Jazz Jackrabbit
(G) One Must Fall:2097        (H) Boppin
                  * Not available with German UltraSound

(0) Exit
Press the letter of the item you wish to select ? ()-6, A-H)
```

Please press "1" to view "README FILE" content.

2. Installation procedures come from Item 4 first, and 5, 6 and 2. (Item 5, 6 and 2 as under Windows)

Notes:

1. All of UltraSound Drivers & Utilities installed ready, REBOOT PC and into Window at MAIN => CONTROL PANEL => DRIVER to check does the " [MCI] CD AUDIO " already in the Installed Drivers list or not. If none, use MOUSE to select " ADD " to add " [MCI] CD AUDIO ", then select CLOSE.

*** **If the " [MCI] CD AUDIO " not in the Installed Drivers, Windows will show " CD-ROM NOT READY " message while you try to access CD-ROM drive.** ***

2. Some of GAME software only support SOUND BLASTER. Then, before you loading the GAME software, please to load UltraSound for SOUND BLASTER emulation utility driver first. Please entry the sub-directory " ULTRASND " and key in " E ", a dialog box will show as below:

```
Gravis UltraSound Emulation manager
Version 1.2
1=Sound Blaster emulation for UltraSound (SBOS)
2=Sound Blaster emulation for UltraSound MAX (MAXSBOS)
3=UltraMID (AIL)
4=Mega-Em -GM/SCC1/MT32 and Sound Blaster
5=Remove all emuations
6=Exit

Which emuation do you wish to activate ?
```

You may choose item 1 to press " 1 ". After that, you will hear "SBOS INSTALLED" voice from speaker. Or, you may directly key-in "SBOS" from sub-directly "ULTRASND". This means, SOUND BLASTER emulation driver is installed ready. If you

did not install this driver, the GAME voice will not be appeared.

3. Normally, you play some GAME programs, the main memory need as more as possible memory space. Here, a example as CONFIG.SYS and AUTOEXEC.BAT files for user reference only.

(CONFIG.SYS)

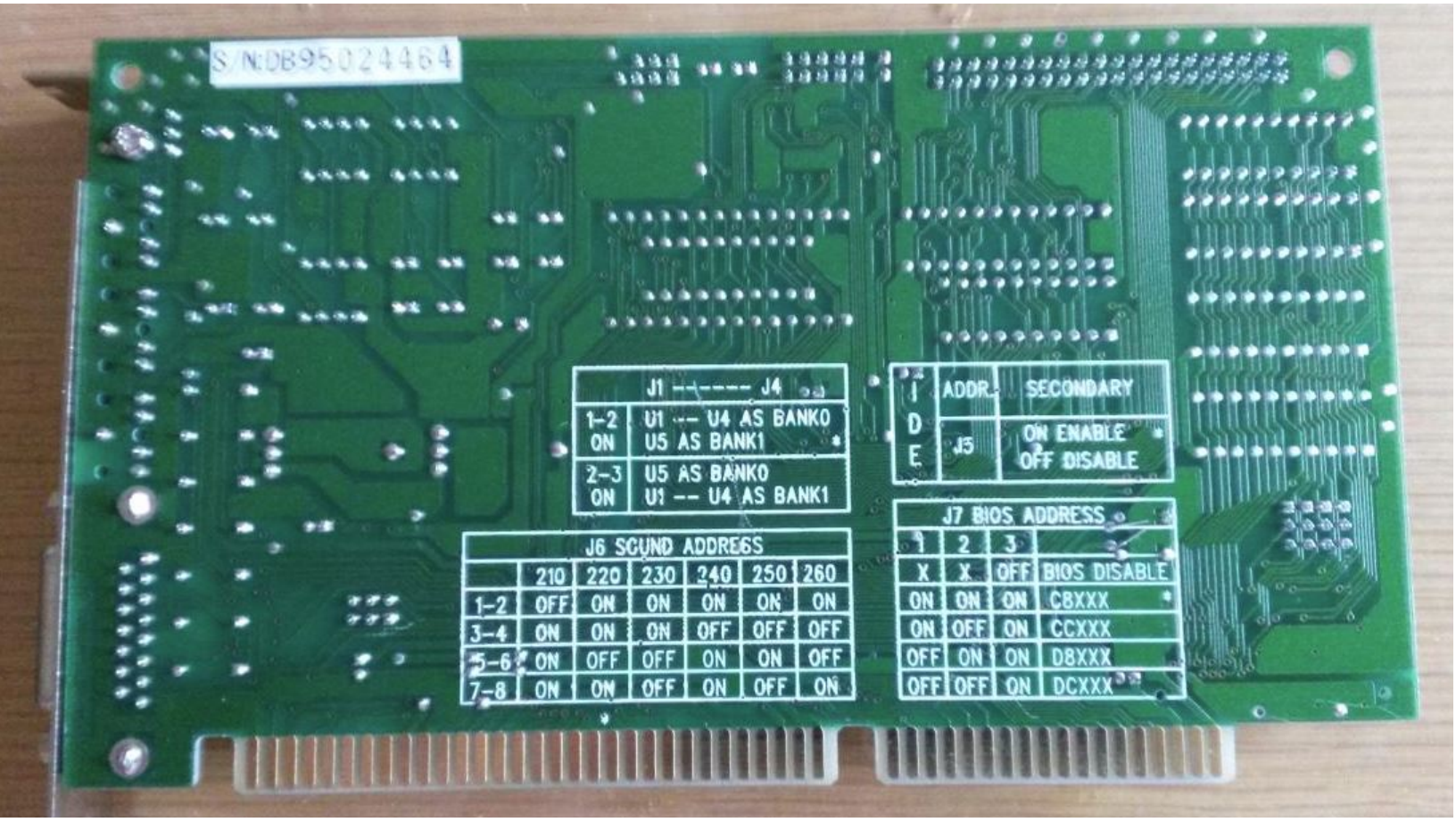
```
DOS=HIGH, UMB
DEVICE=C:\DOS\HIMEM.SYS
BUFFERS=15
FILES=25
```

(AUTOEXEC.BAT)

```
@REM ==== Gravis initialization (4.10) ====
@SET ULTRASND=220,1,3,11,5
@SET ULTRADIR=C:\ULTRASND
@SET BLASTER=A220 I5 D1 TI
@C:\ULTRASND\ULTRINIT.EXE -ej
@REM ==== Gravis initialization ends ====
PATH=C:\DOS;C:\ULTRASND
```

4. If your sound card with LBA ROM BIOS inside, please also refer to the LBA ROM BIOS User's Manual for detail description.

PROMISE
TECHNOLOGY,INC.
IDE
ADDR. SEL
TDA1545
27256
ADVANCED GRAVIS GF1D1
GRAVIS GF1
ICS1614
Amigo
Ultra-Sound Compatible
QC OK
MADE IN TAIWAN R.O.C.
MIDI/GAME


S/N:DB95024464
J1 --------- J4
1-2 ON U1 -- U4 AS BANK0 U5 AS BANK1
2-3 ON U5 AS BANK0 U1 -- U4 AS BANK1
IDE ADDR. SECONDARY
J5 ON ENABLE OFF DISABLE
J6 SOUND ADDRESS
210 220 230 240 250 260
1-2 OFF ON ON ON ON ON
3-4 ON ON ON OFF OFF OFF
5-6 ON OFF OFF ON ON OFF
7-8 ON ON OFF ON OFF ON
J7 BIOS ADDRESS
1 2 3
X X OFF BIOS DISABLE
ON ON ON C8XXX
ON OFF ON CCXXX
OFF ON ON D8XXX
OFF OFF ON DCXXX